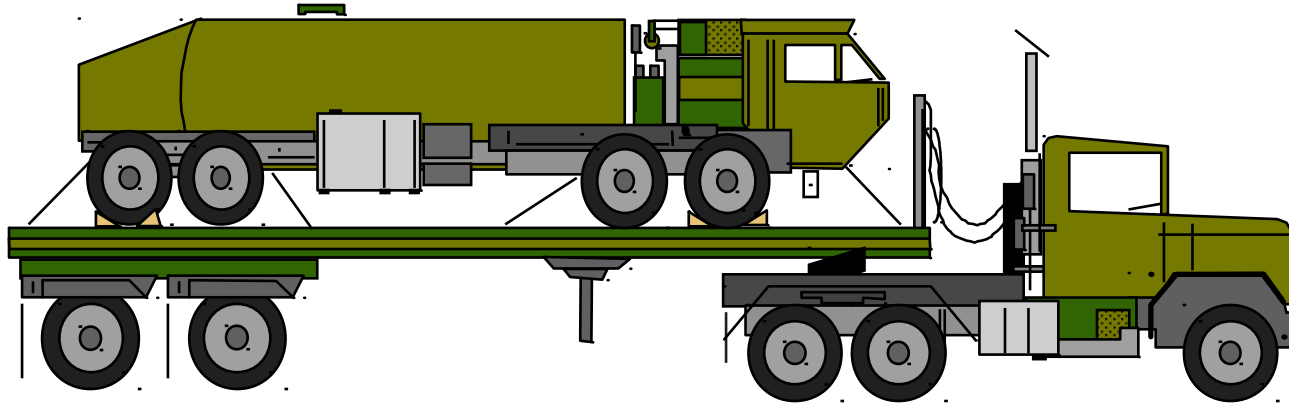


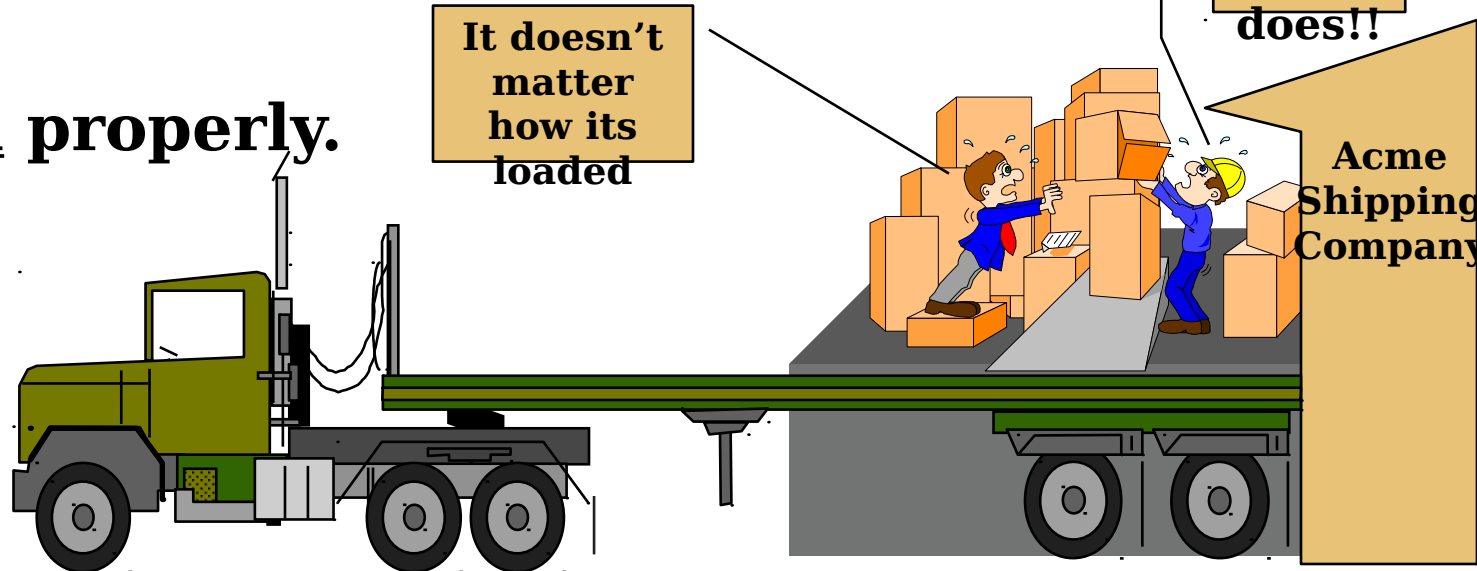
Transporting Cargo



It cannot be transported unless..



..its loaded properly.



Objective



At the completion of this lesson you (the student) will be able to demonstrate the skills and knowledge required in loading and transporting cargo without damaging equipment, the surrounding area or injuring to personnel.

Transporting Cargo

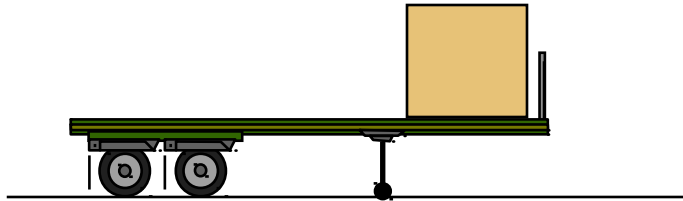
Driver Responsibilities



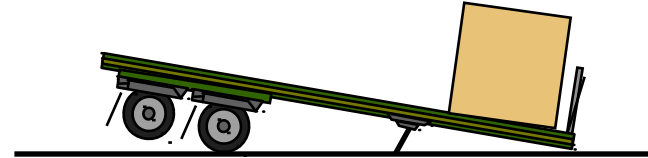
The driver supervises the loading of his/her vehicle and ensures that his cargo is properly loaded and secured against shifting. He/she further ensures that the load is balanced and within the vehicle capacity as noted on the data plate. He/she covers the vehicle tarpaulin to protect the load from the weather. Once the driver accepts the load from the shipper, he/she is responsible for its safe delivery. The driver should not accept an unsafe load and must resolve any dispute before moving on.

Transporting Cargo

Weight and Balance

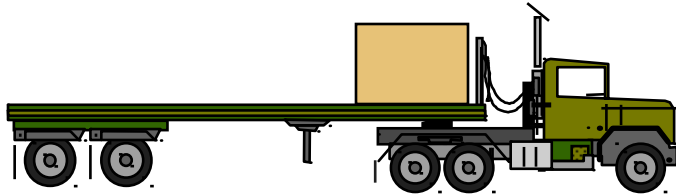


when loaded like this..

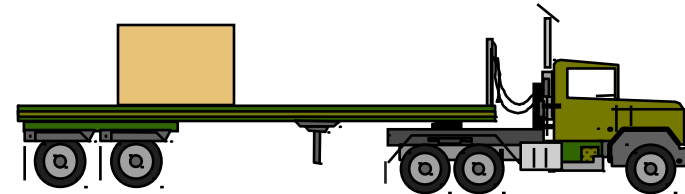


this is the result.

Wrong !



Wrong !



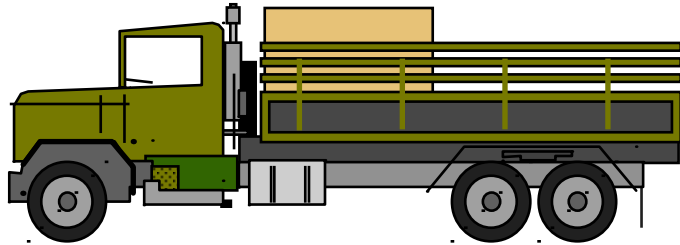
Right !

**This overloads and shortens tire life,
bends the truck rear axle housing.
Applying the trailer brakes may lock
the wheels, cause flat spots and skidding.**

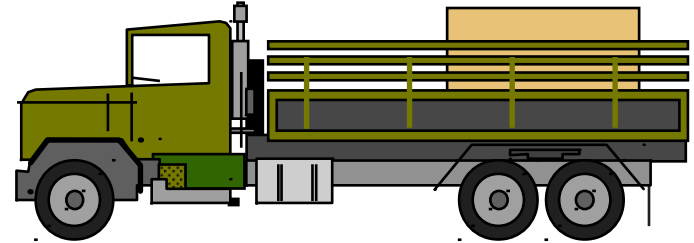
Transporting Cargo



Weight and Balance

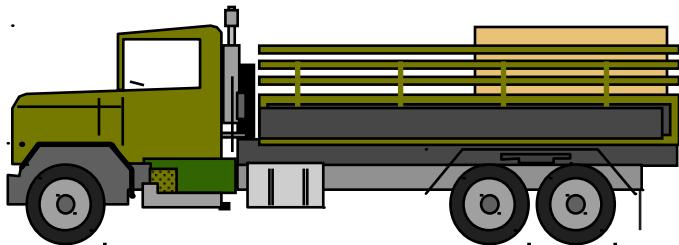


Wrong !

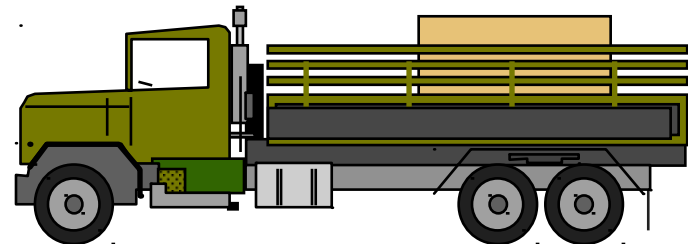


Right !

This will bend the frame, overload the front tires, make steering harder. **Place heavy part of load near rear axle for proper tire loading and to keep frame from bending.**



Wrong !



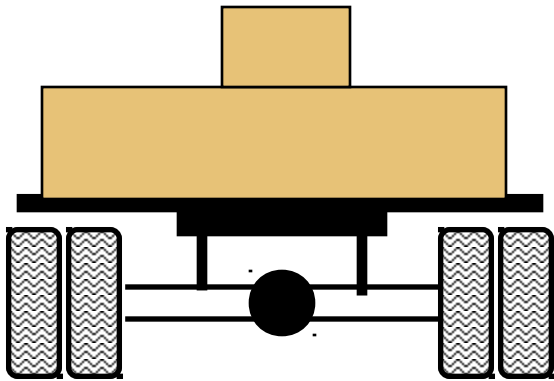
Right !

This kind of weight distribution bends the frame, overloads rear tires, and makes steering almost impossible. **Set a concentrated load just ahead of the rear axle with the longest spread on the floor, if possible.**

Transporting Cargo

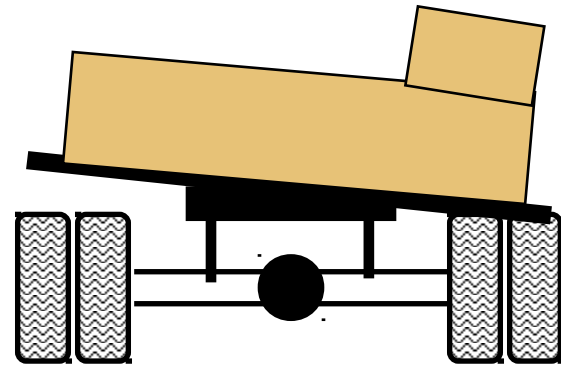


Weight and Balance continued



Right !

**Nothing overloaded.
Frame won't twist and
loosen cross-member rivets.**



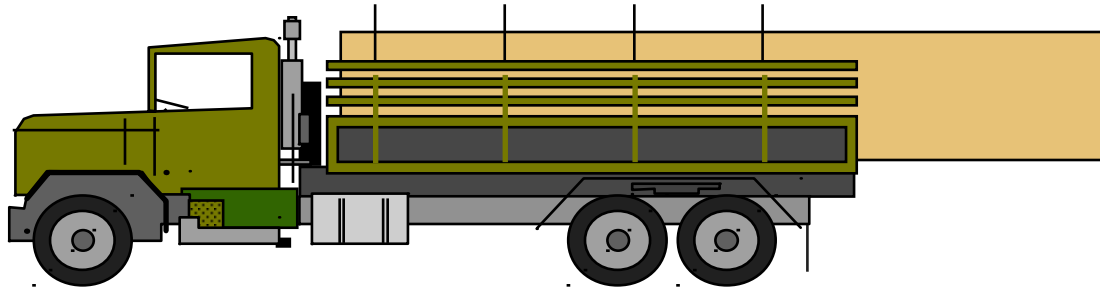
Wrong !

**This overloads one spring and
set of tires. Brakes lock on the
right side, causing skids.**

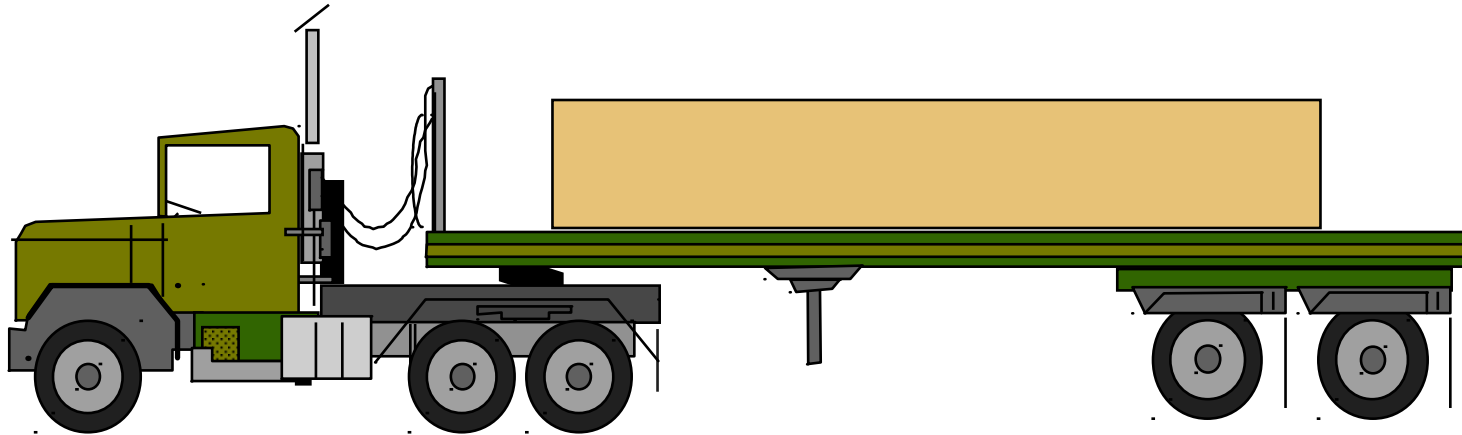
Transporting Cargo



Choosing the right vehicle



Wrong !



Right !

Transporting Cargo



Definitions

- Gross Vehicle Weight (GVW)
- Gross Combination Weight (GCW)
- Gross Vehicle Weight Rating (GVWR)
- Gross Combination Weight Rating (GCWR)
- Axle weight
- Tire load
- Suspension systems
- Coupling devices - rated for max. weight they pull and/or carry

Transporting Cargo

Legal Weight Limits



- Keep weights within legal limits.
- Overloading can seriously affect steering, braking, and speed control.
- During bad weather or in mountainous terrain, it may not be safe to operate at legal maximum.

Transporting Cargo



Top heavy loads

“High centers of gravity are bad news”

Don't be top heavy !!

- Avoid a high center of gravity.
- Keep the loads as low as possible.

A high center of gravity will increase chances of rollover when turning.

Transporting Cargo



Securing Cargo

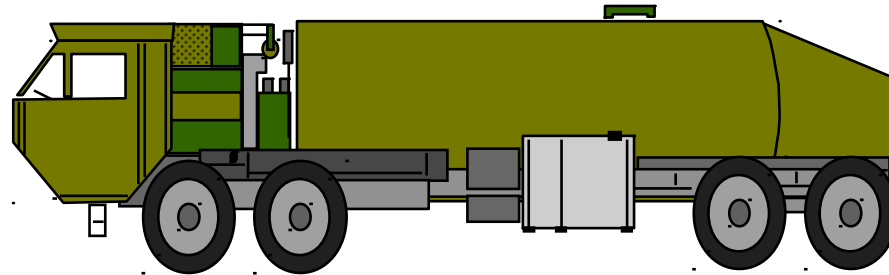
- Blocking
- Bracing
- Cargo tiedown
- Header boards
- Covering cargo
- Sealed and containerized cargo

Transporting Cargo

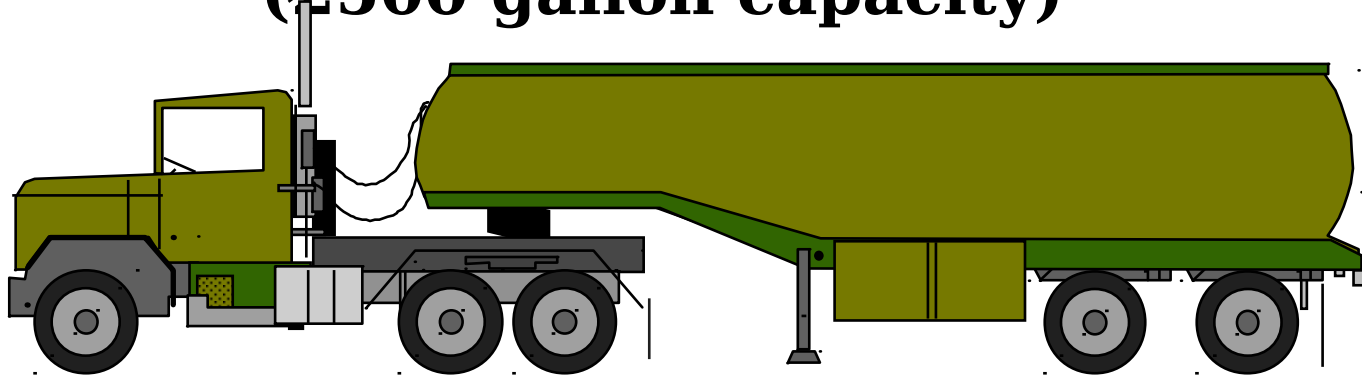


Tank Vehicles

Used to transport liquid or liquefied gaseous material in a permanently attached tank or a portable attachment having a capacity of 1000 gallons or more



M978 HEMTT Tanker
(2500 gallon capacity)

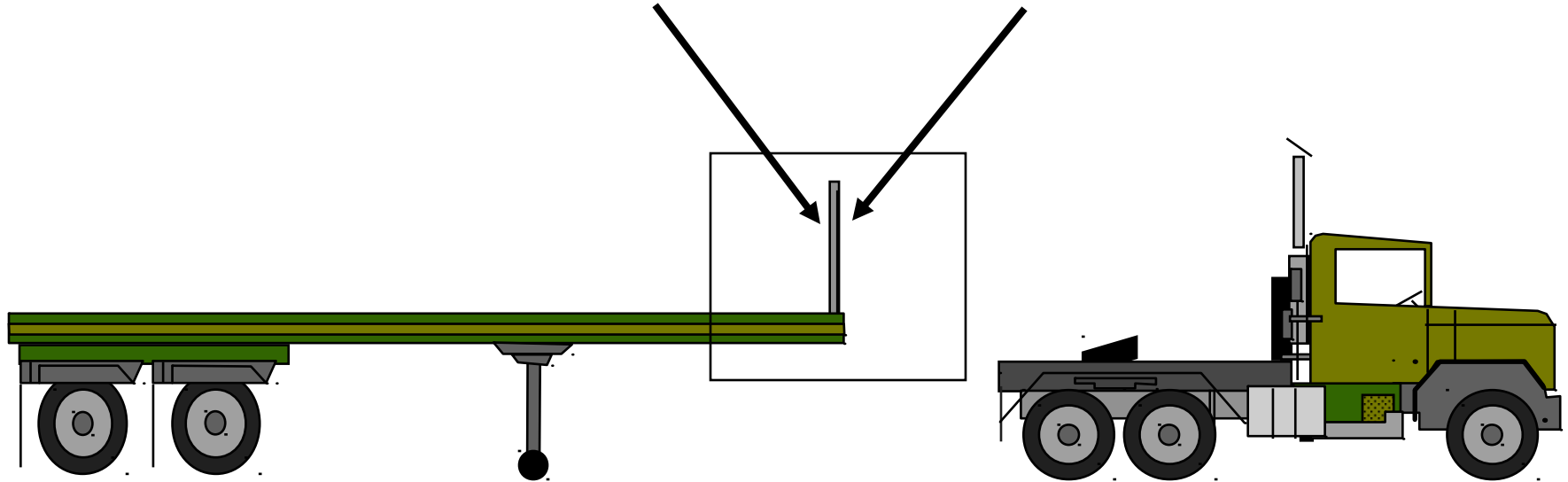


M931 Tractor w/5000 gallon tank semi-trailer

Transporting Cargo



Header Boards (“Headache Racks”)



The forward barrier of the trailer is designed to prevent further forward movement of cargo. Is also used to stabilize the cargo during ship.

Transporting Cargo



Protecting the Cargo (covering up)

Three basic reasons to protect the load

- To protect people from spilled cargo
- To protect cargo from weather
- To prevent casual observation of sensitive l

Transporting Cargo

Protecting the Cargo



Monitor cargo covers in the mirrors during travel. covers can tear loose, exposing the load or impeding or the driver and others on the road.

The driver may not be able to inspect sealed loads ensure that the size and weight limits of both the the roadway are not exceeded.

If sensitive cargo is exposed to casual observation could be compromised. Don't give the enemy an e

Transporting Cargo



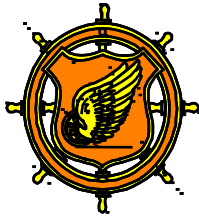
Cargo needing special attention

Dry bulk

- **A high center of gravity can allow the load to shift.**
- **Be extremely careful taking sharp turns and going into**
- **turns.**

Oversized loads

- **Overlength, overwidth, and over weight loads require special permits.**
- **Limited driving times.**
- **Special equipment such as signs and flags may be required.**
- **Load may require escort vehicles or pilot vehicles with**
signs and flashing lights.



- ! Driver responsibilities**
- ! Weight and balance of loads**
- ! Definitions**
- ! Weight limits**
- ! Top heavy loads**
- ! Securing cargo**
- ! Protecting cargo**
- ! Cargo needing special attention**